In the Claims (clean copy as amended)

13. (Amended) A method for identifying substances having anesthetic properties, wherein said substances produce a reversible state of unconsciousness with concurrent amnesia and analgesia in a mammal upon inhalation comprising:

(a) contacting said substance with a mammalian potassium transport protein, wherein said potassium transport protein exhibits outward-going potassium rectification; and

(b) determining the potassium transport activity of said potassium transport protein, wherein an activation of potassium transport is indicative of said substance having anesthetic properties.

18. (Amended) A method for identifying substances having anesthetic properties, wherein said substances produce a reversible state of unconsciousness with concurrent amnesia and analgesia in a mammal upon inhalation comprising:

(a) contacting said substance with COS cells, wherein said COS cells are transfected with a nucleotide vector comprising a nucleic acid molecule encoding TREK-1, wherein said COS cells transiently express said TREK-1 on a surface of said COS cells, and wherein said TREK-1 exhibits outward-going potassium rectification; and

(b) determining the potassium transport activity of said TREK-1 wherein an activation of potassium transport is indicative of said substance having said anesthetic properties.

19. (Amended) A method for identifying substances having anesthetic properties, wherein said substances produce a reversible state of unconsciousness with concurrent amnesia and analgesia in a mammal upon inhalation comprising:

(a) contacting said substance with COS cells, wherein said COS cells are transfected with a nucleotide vector comprising a nucleic acid molecule encoding an amino acid sequence that is at least 95% identical to SEQ ID NO:2, wherein said COS cells transiently express said amino acid sequence on a surface of said COS cells, and wherein said amino acid sequence exhibits outward-going potassium rectification; and

(b) determining the potassium transport activity of said amino acid sequence wherein an activation of potassium transport is indicative of said substance having said anesthetic properties.

20. (Amended) A method for identifying substances having anesthetic properties, wherein said substances produce a reversible state of unconsciousness with concurrent amnesia and analgesia in a mammal upon inhalation comprising:

(a) contacting said substance with COS cells, wherein said COS cells are transfected with a nucleotide vector comprising a nucleic acid molecule encoding an amino acid sequence that is at least 95% identical to SEQ ID NO:4, wherein said COS cells transiently express said amino acid sequence on a surface of said COS cells, and wherein said amino acid sequence exhibits outward-going potassium rectification; and

(b) determining the potassium transport activity of said amino acid sequence wherein an activation of potassium transport is indicative of said substance having said anesthetic properties.

22. (Amended) A method for identifying substances having anesthetic properties, wherein said substances produce a reversible state of unconsciousness with concurrent amnesia and analgesia in a mammal upon inhalation comprising:

(a) contacting said substance with transfected cells, wherein said transfected cells are transfected with a nucleotide vector comprising a nucleic acid molecule encoding TASK, wherein said transfected cells transiently express said TASK on a surface of said transfected cells, and wherein said TASK exhibits outward-going potassium rectification; and

(b) determining the potassium transport activity of said TASK wherein an activation of potassium transport is indicative of said substance having said anesthetic properties.

A11

23. (Amended) A method for identifying substances having anesthetic properties, wherein said substances produce a reversible state of unconsciousness with concurrent amnesia and analgesia in a mammal upon inhalation comprising:

(a) contacting said substance with transfected cells, wherein said transfected cells are transfected with a nucleotide vector comprising a nucleic acid molecule encoding an amino acid sequence that is at least 95% identical to SEQ ID NO:5, wherein said transfected cells transiently express said amino acid sequence on a surface of said transfected cells, and wherein said amino acid sequence exhibits outward-going potassium rectification; and

(b) determining the potassium transport activity of said amino acid sequence wherein an activation of potassium transport is indicative of said substance having said anesthetic properties.

Please cancel Claims 17, 21 and 24 without prejudice and without disclaimer of the subject matter contained therein.